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30 January 1959

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MEMORANDUM FOR THE RECORD

SUBJECT: Visit to [] Concerning J-75

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1. The undersigned and Col. Leo Geary visited [] 28 January 1959 to discuss feasibility of installing the J-75-P2 (Navy) Engine in the U-2.

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2. The undersigned and Col. Geary met with [] representatives, Messrs [] and discussed the following subjects:

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- A. Conversion of the J-57-31: Conversion of the J-57 to permit higher operating temperatures to attain additional altitude was not considered since the J-75-P2 promised greater gains that could not be achieved by converting the J-57-31.
- B. The J-75-P2 (Non-afterburner type) is presently under production contract by the Navy to power the "Skymaster." The Skymaster program has been cutback by the Navy which should make sufficient engines available for test purposes.
- C. All concerned agreed that the first step would be for Col. Geary to make available two engines to [] for conversion. Col. Geary is presently borrowing two engines from the Navy which will be diverted from production.
- D. Upon receipt of these two engines [] will notify Col. Geary for immediate airlift of one to Burbank in order that Kelly Johnson can start fitting. The second engine will remain [] and be converted as fitting progresses at Burbank.

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3. Problems:

- A. Mounting: The J-75 will probably have to be changed from top to side mounting because of top clearance which will require structural changes in the "Bird."
- B. Additional Weight: Approximately 1,250 pounds will be added from engine alone not counting structural changes that will add weight which will reduce range.

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C. Minimum Flow: The Min. Flow will have to be increased to 650 pounds, to achieve an altitude increase. This could present problems in landing because idle position would produce approximately 50-60%. [] stated that this problem could be overcome by minor rework of the fuel control through testing.

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D. Range: Due to increased consumption and additional weight the range will decrease to a presently unknown factor, but by using slipper tanks it was assumed that the present flight profile of a non-slippered "Bird" could be attained.

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E. Altitude Gain: [] would not hazard a gestimate without more facts but conservative estimates indicated an approximate gain of 2,500 feet.

F. Two additional [] personnel will require CHALICE clearance to permit entry at Lockheed and Edwards, to assist in installation and testing. FRS of the two individuals have been given to security for post-haste processing. It is recommended that these clearances be processed as rapidly as possible due to the fact that one of the individuals will accompany the first engine to Lockheed which could be within a few days after Navy O.K.'s the loan.

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4. Summary: Application of the J-75-P2 in the "Bird" is most promising in respect to altitude gain. This writer is of the opinion that greater gains will be possible based on prior performance of [] Therefore, it is recommended that this program be pursued "post-haste" to accomplish necessary testing.

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JWD:ms (30 January 1959)
Dist: 0 - Col. Burke
2 - Operations
3 - Security
4 - Contracts
5 - R&D
6 - Mat Chrono File

[]
CAPTAIN USAF

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